

SHIP DAN, 11th 2017

Work Order ID 154255

154255

Page 1

Wednesday, December 07, 2016 10:19:53 A

Item ID: D3391-011

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Fwd Tube Assembly

Start Date: 12/13/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 12/22/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

VS / DAS
21
9-89

Date:

16/12/07

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3391

J

100

100

Skidtubes

0.00

Skidtubes

Memo

0.07

Skidtubes

Cut as per dwg.

 16-12-12

110

110

BENDING MACHINE - SKIDTUBES

0.00

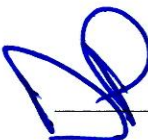
CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

Bend as per Dwg D3391

H-6.9"  16-12-12

120

120

QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

0.00

Quality Control

① 16-12-12 PD

Work Order ID 154255

Wednesday, December 07, 2016 10:19:53 A

154255

Page 2

Item ID: D3391-011

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N900040100

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1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	HAAS CNC VERTICAL MACHINING #1	0.00							
130									
HAAS 1	Memo	0.20							
HAAS CNC vertical machine #1	1-Machine as per Folio FA590 Rev. <u>AA</u> & Dwg D3391 Rev. <u>3</u> Identify as D3391-1								
	2-Deburr								
140	QC2- Inspect parts off machine FAI/FAIB	0.00							
140									
QC	Memo	0.00							
Quality Control									
150	CONVENTIONAL MILLING MACHINE	0.00							
150									
Mill Conv	Memo	0.08							
Conventional Milling Machine	1-Drill .1875" at end of tube as per Dwg D3391								

DAS
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154255

Wednesday, December 07, 2016 10:19:53 A

N900040100

Stop ***NS2***

Reference:

Stop *NR2*

17/01/03

Work Order ID 154255

Wednesday, December 07, 2016 10:19:53 A

154255

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Item ID: D3391-011

Accept

N900040100

Setup Start

NS1

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NS2

Item Name: Fwd Tube Assembly

Start Date: 12/13/2016 Start Qty: 1.00

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Cust Item ID:

Required Date: 12/22/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Run Start

NR1

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop

NR2

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan.
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

180

180

Skidtubes

Skidtubes

Skidtubes

Memo

0.11

1- Drill Remaining two holes for tow cap using DT 8819 Locating off of .1875" holes drilled in previous step (Do not open tow cap holes to finish size)

2- Drill and float bag holes as per Dwg D3391 using DT8798 (DRILL ALL HOLES)

3-Open tow cap holes to .208" as per Dwg D3391

4-Open Tow Ring hole to .640" as per Dwg D3391

5- open float bag holes 0.328" and counter sink as per dwg D3391

6-Deburr and scribe batch # inside aft end

7- transfer drill D3391-011 with D3391-013

NO WEARPLATE HOLES ARE TRANSFER DRILLED

MID TUBE BATCH #

154252**17-01-03 DT**

190

190

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

17-01-05DAS
9
9-89

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N900040100

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NS2

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Start Date: 12/13/2016 Start Qty: 1.00

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Cust Item ID:

Required Date: 12/22/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	Chemical Conversion Coat per QSI005 4.1	0.00							
200 HandFinish	Memo	0.09				(X1)	Ø		2017/01/05 BEB
Hand Finishing									
210	QC7-Inspect Chemical Conversion Coat	0.00							
210 QC	Memo	0.00							
Quality Control									
220	Skidtubes	0.00							
220 Skidtubes	Memo	0.08							
Skidtubes	1-Install crossbolt spacers per dwg D3391 A/R Magnabond 6398 batch: 134167 2- Grind flush 3- back drill crossbolt if necessary								

DAS
03
3-49

DP 17-1-5

DP 17-1-5
exp 17-6-30

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Wednesday, December 07, 2016 10:19:53 A

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N900040100

Setup Start

NS1

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Stop

NS2

Item Name: Fwd Tube Assembly

Start Date: 12/13/2016 Start Qty: 1.00

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	QC5- Inspect part completeness to step on W/O	0.00							
230									
QC	Memo	0.00							
Quality Control									
235	Pressure Wash per QSI005 4.3	0.00							
235									
HandFinish	Memo	0.05							
Hand Finishing	AND REALODINE AS PER PAR09-043								
240		0.00							
240									
SprayPaint	Memo	0.00							
Spray Painting	PRIME AS PER DWG AND QSI005 4.2.1.3.3 PRIMER BATCH: <u>135929</u> PAINT AS PER DWG AND QSI005 4.2.2.4 PAINT: <u>136205</u>								

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NS1

Revision ID:

Stop

NS2

Item Name: Fwd Tube Assembly

Start Date: 12/13/2016 Start Qty: 1.00

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Cust Item ID:

Required Date: 12/22/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250	QC14- Inspect Spray Paint	0.00							
250									
QC	Memo	0.00							
Quality Control									
255		0.00							
255	Skidtubes								
Skidtubes	Memo	0.08							
Skidtubes	*** install D3591-1 spacer as per DSI9364 and wearplate as per DWG ***								
257	QC5- Inspect part completeness to step on W/O	0.00							
257									
QC	Memo	0.00							
Quality Control									

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9-89

JAN 10 2017

Work Order ID 154255***154255***

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Wednesday, December 07, 2016 10:19:53 A

Item ID: D3391-011 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Fwd Tube Assembly
Start Date: 12/13/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 12/22/2016 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260	Identify as per dwg & Stock Location: <u>w/o</u>	0.00							
260									
Packaging	Memo	0.00							
Packaging									
280	QC21- Final Inspection - Work Order Release	0.00							
280									
QC	Memo	0.02							
Quality Control									

DAS
21
9-89
JAN 10 2017

Picklist Print

Wednesday, December 07, 2016 10:20:50 AM

Page 1

Work Order ID: 154255

154255

Parent Item: D3391-011

D3391-011

Parent Item Name: Fwd Tube Assembly

Start Date: 12/13/2016

Required Date: 12/22/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP A05.09.13New issue KJ/JLM
 IPP B06.02.09Dwg rev.D EC
 IPP C 07.03.13 revF dwg ec
 IPP D 07.11.01 ecn1053P EC
 IPP Rev:E ECN 1056 07-11-12 DD verified by:EC
 IPP Rev:F 08-09-08 new process (ecn 08-510) DD verified by:EC
 IPP Rev:G 08-09-10 revH as per dwg DD verified by:EC IPP Rev:H
 10.04.07 add part in bom DD verified by:JLM IPP Rev:I 11.11.14 AS
 PER REV.I DD verified by:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6013-047 *D6013-047* Skidtube Material		Manufactured	No			100	Each	84.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG003		84							
				86064		84							
D3401-041 *D3401-041* Tow Cap Assembly		Manufactured	No			255	Each	7.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FP001		7							
				138950		3							
				142465		2							
				147909		2							
D4095-051 *D4095-051* Wearpad Fwd		Manufactured	No			255	Each	10.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FP001		10							
				149296		10							

**

**

**

16-12-12

17/01/09

17/01/09

xl

Picklist Print

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Wednesday, December 07, 2016 10:20:50 AM

Work Order ID: 154255

154255

Parent Item: D3391-011

D3391-011

Parent Item Name: Fwd Tube Assembly

Start Date: 12/13/2016

Required Date: 12/22/2016

Start Qty: 1.00

Required Qty: 1.00

D3670-4-200

Manufactured No

220

Each

70.0000

9

9

D3670-4-200

Bushing

**

DP 17-1-5

Location

Loc Qty

Loc Code

FG

10

87709

10

LG001

60

138819

3

150477

57

9

D3672-1

Manufactured No

255

Each

948.0000

4

4

D3672-1

Washer, Phenolic

**

HL 17/01/09

Location

Loc Qty

Loc Code

FG

10

85222

10

FP001

780

112218

4

134785

276

150074

500

ST049

158

147077

158

x4

Picklist Print

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Page 3

Work Order ID: 154255

154255

Parent Item: D3391-011

D3391-011

Parent Item Name: Fwd Tube Assembly

Start Date: 12/13/2016**Required Date:** 12/22/2016

Start Qty: 1.00

Required Qty: 1.00

AN3C4A

Purchased

No

255

Each

1,932.000

10

10

22 17/10/09

AN3C4A

Bolt

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FG	20	
122814	20	
FP001	706	
M133440	7	
M134396	41	
M134509	6	
M134606	29	
M134676	44	
M134762	106	
M134861	13	
M135058	123	
M135127	22	
M135297	52	
M135442	2	
M135774	53	
M135864	64	
M135948	144	
OVER002	1000	
<u>M136295</u>	1000	
ST350	206	
M135704	206	

Picklist Print

Wednesday, December 07, 2016 10:20:50 AM

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154255

Parent Item: D3391-011

D3391-011

Parent Item Name: Fwd Tube Assembly

Start Date: 12/13/2016

Required Date: 12/22/2016

Start Qty: 1.00

Required Qty: 1.00

NAS1149C0332R

Purchased

No

255

Each

5,036.000

10

10

NAS1149C0332R

17/01/09

WASHER

Location

Loc Qty

Loc Code

FP001

668

m135672

33

m135948

14

m136199

621

GA

74

m133284

74

ST260a

3500

m135466

1000

m136042

500

m136301

2000

x10

ST266

794

m135408

94

m135766

500

m135908

200

AEIS-1032-225

AEIS8-1032-225

Purchased

No

255

Each

0.0000

10

10

AFI S-1032-225

AEIS4-1032-225 / M135998

x10

17/01/09

Insert

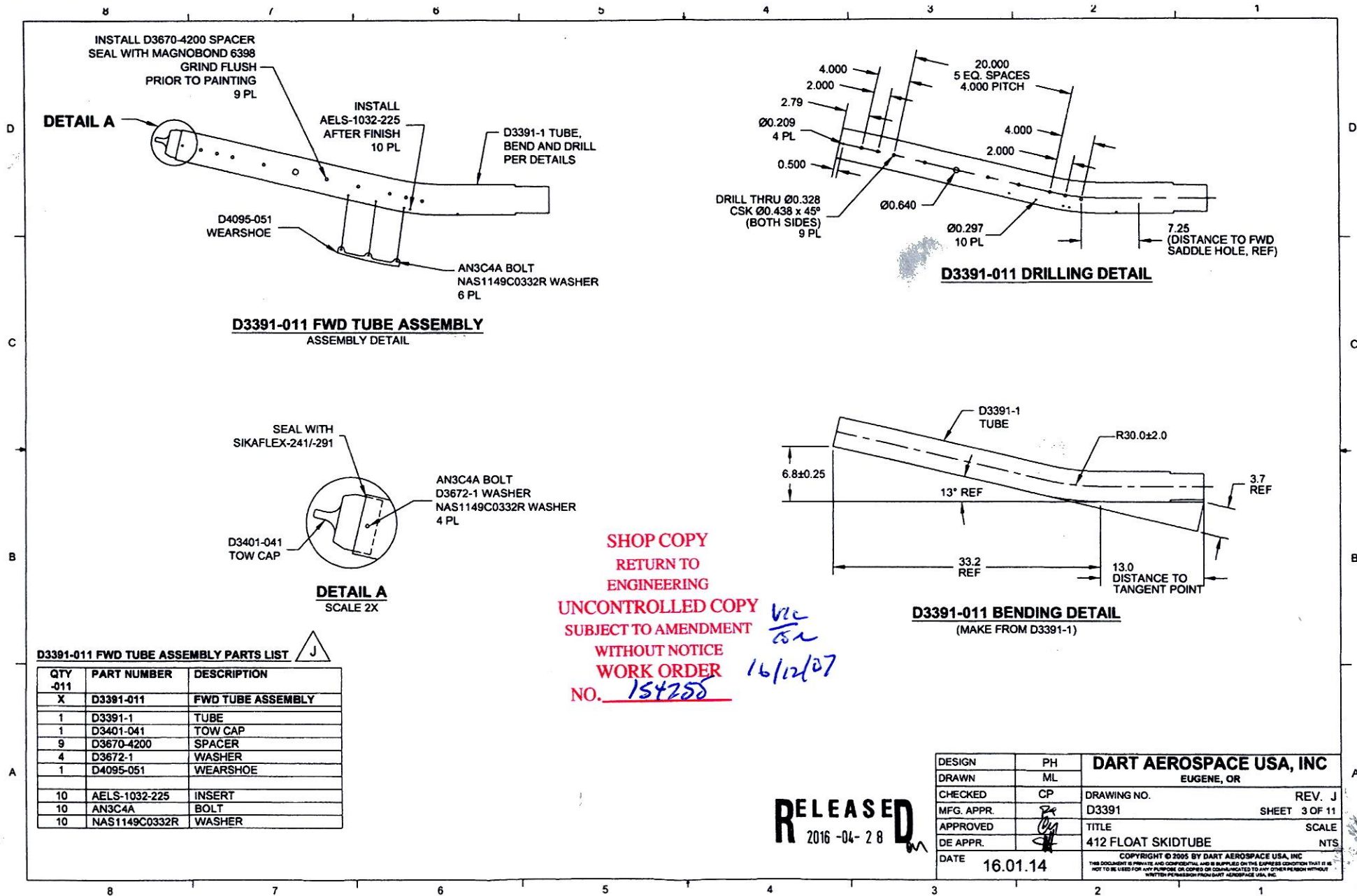
DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :	MRB (QS1042) Approval		
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					



DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

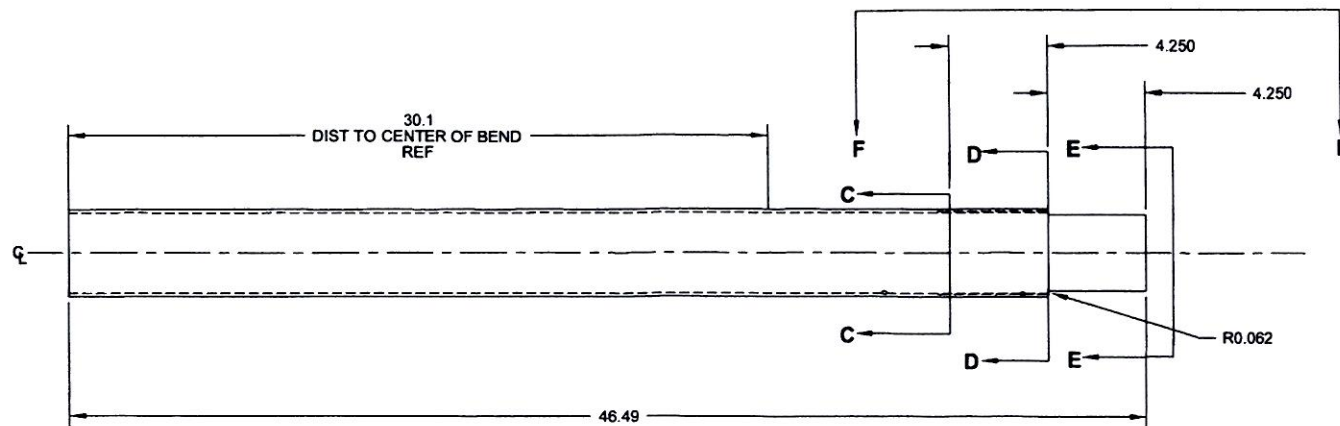


QA Closed: _____ Date: _____

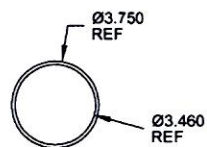
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval	
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

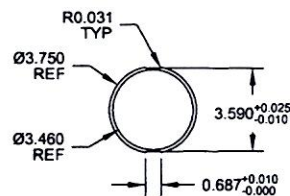
Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :						
Misidentified	☐	Past Due	☐							



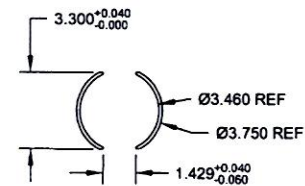
D3391-1 TUBE
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



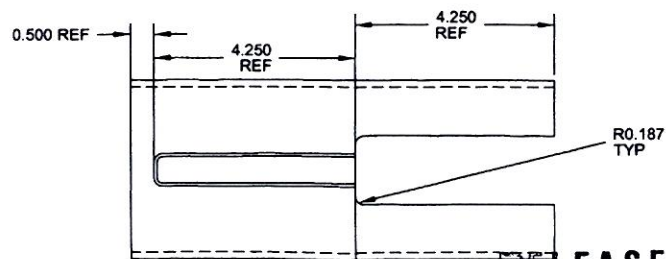
SECTION C-C



SECTION D-D



SECTION E-E



VIEW F-F
SCALE 2X

RELEASED
2016-04-28

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	ML	EUGENE, OR	
CHECKED	CP	DRAWING NO. D3391	REV. J
MFG. APPR.	22	SHEET 5 OF 11	
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	16.01.14	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																																												
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